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Substitute for form 1449A/PTO Complete if Known INFORMATION DISCLOSURE **Application Number** 09/689136 STATEMENT BY APPLICANT October 12, 2000 **Filing Date** First Named Inventor Engelhardt Ph.D., John APR 1 8 2002 **Group Art Unit** 1641 Unknown **Examiner Name** Attorney Docket No: 00875.032US1 Sheet 1 of 4

		US PA	TENT DOCUMENT	S	APR 2 4 2002
Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass TECH CENTAPPEOPRESS 0/2900

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subcla ss	T²
DS	WO-00/47220 🥕	02/11/2000	Kenten, John H., et al	A61K	38/00	
118	WO-95/15384 (*	11/29/1994	Johnson, David C., et al	C12N	15/38	
DS	WO-99/60146	05/20/1998	Engelhardt, John F., et al	C12N	15/86	

	OTHE	R DOCUMENTS NON PATENT LITERATURE DOCUMENTS	:
Examiner Initials*	Cite No 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
		ALEXANDER, I.E., et al., "DNA-Damaging Agents Greatly Increase the	
PS	3	Transduction of Nondividing Cells by Adeno-Associated Virus Vectors", <u>Journal of Virology, 68 (12)</u> , (1994),pp. 8282-8287	
		ALEXANDER, I.E., et al., "Effects of Gamma Irragilation on the Transduction of	
De	4	Dividing and Nondviding Cells in Brain and Muscle of Rats by Adeno-Associated Virus Vectors", Human Gene Therapy, 7, (1996),pp. 841-850	
		BARTLETT, JEFFREY.S. ,et al. ,"Infectious entry pathway of adeno-associated	
PS-	_	virus and adeno-associated virus vectors", <u>J. of Virology, Vol. 74, No. 6,</u>	
*7	5	<u>XP002154341,</u> (March 2000),2777-2785	
		BARTLETT, J.S. ,et al. ,"Targeted adeno-associated virus vector transduction of	
Ne	6	nonpermissive cells mediated by a bispecific F(ab'gamma)2 antibody", Nature	
W3	6	Biotechnology, 17, (1999),pp. 181-186	
ne	_	BASAK, S.,et al., "Infectious Entry Pathways for Canine Parvovirus", Virology,	
DS	7	186, (1992),pp. 368-376	
05	8	CHU, Q.,et al., "Binding and uptake of Cationic Lipid: pDNA Complexes by	
03		Polarized Airway Epithelial Cells", Human Gene Therapy, 10, (1999),pp. 25-36	
DS	9	COONROD, A.,et al., "On the mechanism of DNA transfection: efficent gene	
103		transfer without viruses", Gene Therapy, 4, (1997),pp. 1313-1321 DIETRICH, CORNELIA.,et al. ,"p53-Dependent cell cycle arrest induced by N-	
		acetyl-L-leucinyl-L-leucinyl-L-norleucinal in platelet-derived growth factor-	
ne	10	stimulated human fibroblasts", Proc. of the Nat'l Academy of Sciences of the US,	
125	(0	Vol. 93, No. 20, XP002154340, (1996),10815-10819	ŀ
		DUAN, D., et al., "Circular Intermediates of Recombinant Adeno-Associated Virus	
00		Have Defined Structural Characteristics Responsible for Long-Term Episomal	
\ <u>\</u>	16	Persistence in Muscle Tissue", Journal of Virology, 72 (11), (1998),pp. 8568-	
	· I	8577	
		DUAN, DONGSHENG.,et al., "Dynamin is required for recombinant adeno-	
NR	12	associated virus type 2 infection", <u>J of Virology</u> , Vol. 73, No. 12, XP002154342, a	
00		(Decmeber 1999),10371-10376	
	13	DUAN, DONGSHENG., "Formation of adeno-associated virus circular genomes >	

EXAMINER \

DATE CONSIDERED 6/19/02

PTO/SB/08A(10-01)
Approved for use through 10/31/2002. OMB 651-0031
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Substitute for form 1449A/PTO Complete if Known INFORMATION DISCLOSURE 09/689136 **Application Number** STATEMENT BY APPLICANT October 12, 2000 **Filing Date** Engelhardt Ph.D., **First Named Inventor Group Art Unit** 1641 APR 1 8 2002 **Examiner Name** Unknown Attorney Docket No: 00875.032US1

	OTHER	R DOCUMENTS NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
05	W Jup	is differentially regulated by adenovirus E4 ORF6 and E2a gene expression", <u>J. Virology, 73 (1),</u> (Jan. 1999),pp. 161-169	
	, ,	DUAN, D,"Polarity Influences the Efficiency of Recombinant Adenoassociated	
DR	1415	Virus Infection in Differentiated Airway Epithelia", Human Gene Therapy, 9,	
62		(Dec. 10, 1998),pp. 2761-2776	
	16	DUAN, D.,et al., "Response to "Polarity Influences the Efficiency of Recombinant Adenoassociated Virus Infection in Differentiated Airway Epithelia"", Human	
188	12/18	Gene Therapy, 10, (1999),pp. 1553-1557	
		EVERETT, R.D., et al., "A viral activator of gene expression functions via the	
108	1647	ubiquitin-proteasome pathway", The EMBO Journal, 17 (24), (1998),pp. 7161- * 7169	
	.7	FASBENDER, AL.,et al., "Complexes of adenovirus with polycationic polymers	
18	178	and cationic lipids increase the efficiency of gene transfer in vitro and in vivo",	
		The Journal of Biological Chemistry, 272 (10), (March 7, 1997),6479-6489	
No	18,0-	FENTEANY, G., et al., "Inhibition of Proteasome Activities and Subunit-Specific Amino-Terminal Threonine Modification by Lactacystin", Science, 268,	
	14	(1995),pp. 726-731	
	19	FERRARI, F.K. ,et al. ,"Second-Strand Synthesis Is a Rate-Limiting Step for	
De	1/20	Efficient Transduction by Recombinant Adeno-Associated Virus Vectors",	
W3		Journal of Virology, 70 (5), (1996),pp. 3227-3234	
.^	2021	FISHER, K.J., et al., "Transduction with Recombinant Adeno-Associated Virus	
18	- 124	for Gene Therapy Is Limited by Leading-Strand Synthesis", <u>Journal of Virology</u> , <u>70 (1)</u> , (1996),pp. 520-532	
40	b1	GOLDBERG, A.L. ,et al. ,"New insights into proteasome function: from	
05	197	archaebacteria to drug development", Chemistry & Biology, 2 (8), (1995),pp. •	
		503-508 GOTTLIEB, T.A. ,et al. ,"Actin Microfilaments Play a Critical Role in Endocytosis	
10	272	at the Apical but not the Basolateral Surface of Polarized Epithelial Cells", The	
B>	707	Journal of Cell Biology, 120 (3), (1993),pp. 695-710	
	23	HALBERT, CL., "Transduction by Adeno-Associated Virus Vectors in the Rabbit	
OZ.	24	Airway: Efficiency, Persistence, and Readministration", Journal of Virology, 71	
P2	11	(8), (Aug. 1997),pp. 5932-5941	
08	245	JENSEN, T.J., et al., "Multiple Proteolytic Systems, Including the Proteasome, Contribute to CFTR Processing", Cell, 83, (1995),pp. 129-135	
		KAPLAN, JOHANNE.M., et al., "Potentiation of gene transfer to the mouse lung	
* NO	25	by complexes of adenvirus vector and polycations improves therapeutic	
(D) S	26	potential", <u>Human Gene Therapy, Vol. 9, No. 10, XP000972242,</u> (July 1, 1998),1469-1479	
20	282	KLOETZEL, P.M., "The Proteasome system: a neglected tool for improvement of	
178	6	novel therapeutic strategies?", Gene Therapy, 5, (1998),pp. 1297-1298	
185	20	LIANG, E.,,et al. ,"Oligonucleotide delivery: a cellular prospective", Pharmazie,	
	7./		

EXAMINER D Suller DATE CONSIDERED 6/9/02

PTO/SB/08A(10-01)
Approved for use through 10/31/2002, OMB 651-0031
US Patent & Trademark Office: U.S. DEPARTMENT OF COMMERCE
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INFORMATION DISCLOSURE STAPEMENT BY APPLICANT	Application Number	09/689136
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NO - mm	First Named Inventor	Engelhardt Ph.D. John 2 4 2002
APR 1 8 2002 (5)	Group Art Unit	1641 IECH CENTED 100
N. M.	Examiner Name	Unknown
Sheet 3 of 4	Attorney Docket No: 0	00875.032US1

	OTHER	R DOCUMENTS NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposlum, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		Vol. 54,No. 8, XP000965598, (Aug. 1999),559-566	
08	. 28	MAH, C.,et al., "Adeno-Associated Virus Type 2-Mediated Gene Transfer: Role of Epidermal Growth Factor Receptor Protein Tyrosine Kinase in Transgene Expression", Journal of Virology, 72 (12), (1998),pp. 9835-9843	
08	29	OBIN, M.,et al., "Neurite Outgrowth in PC12 Cells", The Journal of Biological Chemistry, 274 (17), (1999),pp. 11789-11795	
DS	30	PICKLES, R.J. ,et al. ,"Limited Entry of Adenovirus Vectors into Well- Differentiated Airway Epithelium Is Responsible for Inefficient Gene Transfer", & Journal of Virology, 72 (7), (1998),pp. 6014-6023	
bs	31	PRYDZ, K.,et al. ,"Effects of Brefeldin A on Endocytosis, and Transport to the Golgi Complex in Polarized MDCK Cells", <u>The Journal of Cell Biology, 119 (2)</u> , (1992),pp. 259-272	
DS	32	QING, K,"Role of tyrosine phosphorylation of a cellular protein in adenoassociated virus 2-mediated transgene expression", PNAS, 94, (Sept. 1997),pp. > 10879-10884	
08	33	ROCK, K.L. ,et al. ,"Inhibitors of the Proteasome Block the Degradation of Mose Cell Proteins and the Generation of Peptides Presented on MHC Class I Molecules", Cell, 78, (1994),pp. 761-771	
DS	34	RUSSELL, D.W., et al., "DNA synthesis and topoisomerase inhibitors increase transduction by adeno-associated virus vectors", PNAS, 92, (1995),pp. 5719-5723	
05	35	SANLIOGLU, S.,et al., "Cellular redox state alters recombinant adenoassociated virus transduction through tyrosine phosphatase pathways", Gene Therapy, 6, (1999),pp. 1427-1437	
05	36	SCHWARTZ, O.,et al. ,"Antiviral Activity of the Proteasome on Incoming Human Immunodeficiency Virus Type 1", <u>Journal of Virology</u> , 72 (5), (1998),pp. 3845-3850	
B	37	TERAMOTO, S,et al. ,"Factors influencing adeno-associated virus-mediated gene transfer to human cystic fibrosis airway epithelial cells: comparison with adenovirus vectors", <u>J. ofVirology, Vol. 72, No. 11, XP002154339</u> , (Nov. 1998),8904-8912	
185	Š	VIHINEN-RANTA, M.,et al., "Intracellular Route of Canine Parvovirus Entry", Journal of Virology, 72 (1), (1998),pp. 802-806	
V3	39	WALTERS, R.W. ,et al. ,"Basolateral Localization of Fiber Receptors Limits Adenovirus Infection from the Apical Surfaceof Airway Epithelia", The Journal of Biological Chemistry, 274 (15), (1999),pp. 10219-10226	
48	40	WALTERS, R.W. ,et al. ,"Incorporation of Adeno-Associated Virus in a Calcium Phosphate Coprecipitate Improves Gene Transfer to Airway Epithelia In Vitro and In Vivo", Journal of Virology, 74 (1), (2000),pp. 535-540	
) BS	41	WICKHAM, T.J. ,et al. ,"Adenovirus targeted to heparan-containing reeptors , increases its gene delivery efficiency to multiple cell types", Nature	

EXAMINER

DATE CONSIDERED 6/9/02

Substitute for form 1449A/PTO Complete if Known INFORMATION DISCLOSURE **Application Number** 09/689136 STATEMENT BY APPLICANT October 12, 2000 **Filing Dat** Engelhardt Ph.D., John APR 2 4 2002 **First Named Inventor** TECH CENTER 1600/2900 1641 **Group Art Unit** APR 1 8 2002 Unknown **Examiner Name** Attorney Docket No: 00875.032US1 Sheet 4 of 47 a mad

	OTHER	R DOCUMENTS NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		Biotechnology, 14, (1996),pp. 1570-1573	
08	42	WICKHAM, T.J., et al., "Targeted Adenovirus Gene Transfer to Endothelial and Smooth Muscle Cells by Using Bispecific Antibodies", <u>Journal of Virology</u> , 70 (10), (1996),pp. 6831-6838	
128	43	WOJCIK,"Inhibition of the proteasome as a therapeutic approach", <u>Drug</u> <u>Discovery Today</u> , 4 (4), (April 1999), pp. 188-192	
DS	44	XIAO, W.,et al., "Adeno-Associated Virus as a Vector for Liver-Directed Gene Threapy", Journal of Virology, 72 (12), (1998),pp. 10222-10226	
S	45	ZABNER, J., et al., "Adenovirus-Mediated Gene Transfer to Ciliated Airway Epithelia Requires Prolonged Incubation Time", <u>Journal of Virology, 70 (10)</u> , 6 (1996),pp. 6994-7003	
98	46	ZABNER, J., et al., "Adenovirus-mediated generation of cAMP-stimulated CI-transport in cystic fibrosis airway epithelia in vitro: effect of promoter and administration method", Gene Therapy, 3, (1996),pp. 458-465	